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Lessons Learned During the Pre-Terra Release 2 Deliveries

Date	Subsystem	Problem Encountered	Fix	How it Could have Been Avoided	Approximate Time Spent Dealing with Problem
6/8/99	Instrument	Couldn't delete Brian's files on /SSIT/CERES/instrument. No group write permission.	Jill got Brian or an SA to delete them.	Set group write permission when testing in /SSIT/CERES or delete files after previous testing.	5 minutes
6/8/99	Instrument	Files ftp'd to samantha would not uncompress. Files were corrupt.	FTP'd the files over again.	Assume this was a network problem that was unavoidable.	30 minutes
6/8/99	Instrument	Excess PCF* files in src tar file. Syntax error occurred during script execution.	Deleted all CER1.* files from /SSIT/CERES/ instrument/rcf directory. Got new tar file.	Check tar files against the listing files before delivering the code.	15 minutes
6/8/99	Instrument	Command in test plan wouldn't cut and paste properly. A file became corrupt because the command that executed was incorrect.	Copied new file from tar file. Did a cut and paste of the command and modified it before execution.	Verify the test plan is correct prior to delivery by executing the commands in the test plan.	15 minutes
6/8/99	Instrument	Two filenames were incorrect in the test plan.	Corrected the test plan.	Verify the test plan is correct prior to delivery by executing the commands in the test plan.	15 minutes
6/9/99	Clouds	Couldn't delete files on /SSIT/ CERES/clouds/rcf directory. No group write permission.	Jill got Brian to delete them.	Set group write permission when testing in /SSIT/ CERES or delete files after previous testing.	5 minutes

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6/10/99	Clouds	There were differences between the output PCF file and the expected PCF file for PGE 1P1. The wrong PCF was in the out_exp directory.	Got a correct version from Walt.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	15 minutes
6/10/99	Clouds	A .met file was not created in the out_comp/QA_Reports directory as expected.	Got corrected script. Ran cleanup script and new script. Cleanup script didn't clean up all necessary files. Tim walked me through cleaning up and rerun-ning the PGE.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	30 minutes
6/10/99	Clouds	*Log* files did not match expected files. The files in the out_exp direc-tory were incorrect.	Tim reran 2 PGEs and provided new *Log* files for out_exp directory.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	Had to wait over-night to get help.
6/10/99	Clouds	Test plan was wrong. *met files were not in the directory as stated.	Test plan was changed to specify the correct directory names.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	Had to wait over-night to get help.
6/11/99	Clouds	Some DIFF* files were of zero length, but test plan said they should have 5 records in them.	Removed the line in the test plan that said the DIFF_ECV* files will have differences.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	5 minutes

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6/24/99	Clouds Redelivery	"make" didn't work.	Did a "make clean," then the "make" worked correctly.	Add "make clean" to test plan if this is necessary.	1 minute
6/24/99	Clouds	Got the error "Problem with NSIDC Data retrieval," because the cleanup script didn't delete 4 files in the shared_data/surfmap directory.	Had to hand-delete the files that Walt told me to delete and had to copy a file from the tar file that had gotten deleted.	Determine why the cleanup script does not delete all necessary files and fix the cleanup script.	30 minutes (tar file had to be uncompressed)
6/24/99	Clouds	Wrong directory was used in two "diff" commands that compared .met files.	Located correct directory that contained the .met files. Changed test plan.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	5 minutes
6/24/99	Clouds	Got 5 differences when comparing the 1P1 PCF file. Wrong PCF file was delivered in out_exp directory. (PCF file gets modified during PGE execution and this was the file that was delivered.)	Continued with PGE execution because this was not a critical error. Got correct files from Tim next day.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	45 minutes on next day
6/24/99	Clouds	Got "Error accessing PC Status data" when executing the Run.CER4.1-4.1P1 script.	Tried to look at Log files. They didn't exist. Noticed a slash was missing in the command. Added slash to test plan and re-executed the script.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	30 minutes

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6/25/99	Clouds	Error when executing a "diff" command that checked a .met file. A slash was missing in the command.	Added a slash in a "diff" command and re-executed the diff command.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	1 minute
6/25/99	Clouds	File that should have been created by the SSF_Compare script had an old date from earlier delivery.	Had to delete the old file and rerun the SSF_Compare script to create new file.	Determine why the cleanup script does not delete all necessary files and fix the script.	5 minutes
6/25/99	Clouds	The DIFF_ECV* files were supposed to have only 5-byte differences, but the files were larger than that.	Found out files should now be of zero length, so a line was removed from the test plan that said there were differences. Received new files to compare.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	15 minutes
6/25/99	Clouds	Input parameter to the Run.CER4.1-4.2P1 was incorrect. Noticed problem before actually executing the script.	Added a dash after TRMM in the command and removed the "PFM-" in the description prior to the command.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	5 minutes
6/25/99	Clouds	Error running 2P1 because the cleanup script did not delete files from the shared_data directory.	Had to hand-delete the files that Walt told me to delete and to copy a file from the tar file that had gotten deleted.	Determine why the cleanup script does not delete all necessary files and fix the script.	10 minutes

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Date	Subsystem	Problem Encountered	Fix	How it Could have Been Avoided	Approximate Time Spent Dealing with Problem
6/25/99	Clouds	LogReport file name was incorrect in the "diff" command that verified the LogReport files.	Changed test plan to specify correct LogReport file name and reran "diff" command.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	5 minutes
6/25/99	Clouds	A .met file was missing in the out_exp directory, so a "diff" command did not work.	Deleted lines from test plan that referenced that .met file as per instructions from Clouds group.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	10 minutes
6/25/99	Clouds	Incorrect .met file name was used in a "diff" command.	Changed test plan to specify correct .met file name in the "diff" command and reran the "diff" command.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	5 minutes
7/1/99	CERESlib	Problem with post_moa file found by TISA Averaging SS.	CERESlib POC modified the file and redelivered it.	Test code thoroughly before delivery to CM.	3 hours
7/2/99	TISA Gridding	There was no write permission on 3 files owned by DAAC personnel that needed to be replaced in the regrid-moa directory.	Jill deleted the 3 files that already existed in the directory.	Set group write permission when testing in /SSIT/ CERES or delete files after operational testing is completed.	2 minutes

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7/2/99	TISA Gridding	Data in the regridmoa data directory that was generated during operational testing of a previous delivery needed to be removed for TISA Gridding testing. (Same problem would occur for the inversion and sarb data directories during testing of other TISA Gridding PGEs.) This could also be a problem with other subsystems.	Removed files from the regridmoa directory. It is possible that these files may have been needed for further DAAC testing. So, for the inversion and sarb data, excess files in those directories were moved to temporary directories until TISA Gridding SSIT testing was completed.	Test plan needs to state that the inversion, sarb, and regridmoa output data directories must be empty when SSIT testing of TISA Gridding is initiated. The DAAC should remove files after operational testing is complete to eliminate this problem.	1 1/2 hours
7/6/99	TISA Averaging	Script was looking for non-existent directory.	Subsystem POC modified script.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	Stopped testing until subsystem POC returned from vacation.
7/12/99	TISA Averaging	Could not copy modified script received from subsystem POC due to no write permission for group.	Asked SA to add write permissions to TISA_avg files.	Add group write permission to all files prior to tarring them up for delivery to CM.	45 minutes
7/12/99	TISA Averaging	A command alias of 'll' was being used.	Changed 'll' to 'ls -l' in script.	Aliases used in scripts should be defined in the scripts where they are used.	2 hours

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Date	Subsystem	Problem Encountered	Fix	How it Could have Been Avoided	Approximate Time Spent Dealing with Problem
7/12/99	TISA Averaging	The /scr directory was not available in the tisa_avg/data directory.	The /scr directory was created in the data directory.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	20 minutes
7/12/99	TISA Averaging	Some file names were incorrect in the test plan.	Reported problems in the test plan to the subsystem POC who fixed them and resubmitted the test plan.	The delivery package should be thoroughly tested according to Test Plan prior to delivery to CM.	3 hours
7/15/99	Clouds	Got an error trying to untar the files in the /verify/CERES directory. The files were of zero length. Determined the problem was with the lack of disk space on /delivery/CERES/incoming on samantha. The files were corrupted during the ftp process.	Had to ftp the files to the /verify/CERES directory on samantha.	The compatibility problem with the "datamanager" software and the IRIX 6.5 operating system on samantha should be fixed. This software is supposed to manage the /delivery/CERES/incoming directory.	1 hour
7/15/99	Clouds	Encountered multiple warnings about the licenses for the C and Fortran90 compilers.	Reported problem to system administrators.	Notify users that these licensing warnings can be ignored.	1 hour
7/16/99	Clouds	Was expecting an operator's manual according to the delivery memo, but none was delivered.	Removed operator's manual information from the delivery memo after talking to subsystem POC.	Verify delivery memo for accuracy.	30 minutes

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Date	Subsystem	Problem Encountered	Fix	How it Could have Been Avoided	Approximate Time Spent Dealing with Problem
9/17/99	TISA Gridding	Files encountered in /SSIT/CERES/ sarb/data/out_comp/data/regridmoa directory which should be empty for TISA Gridding testing.	Sent mail to cer-estst@samantha asking that the files be removed.	Files should be removed after completion of previous SARB testing.	15 minutes
9/19/99	TISA Gridding	Post MOA Processor ran in 33 min. instead of the expected 72 minutes	Continued with output comparisons.	Update test plan with correct test summary if necessary.	2 minutes
9/19/99	TISA Gridding	Got error during evaluation of output: on first "cmp_CER9.1P1.csh" command.	A file was missing from the test_suites directory.	SARB's regridmoa directory should have been empty before start of testing. A file was inadvertently deleted that was needed later.	Overnight
9/20/99	GGEO	POC encountered a problem with code that was delivered today. Will redeliver.	Redeliver *scr* tar files.	Complete testing before code is delivered to CM.	Overnight
9/21/99	GGEO	Could not FTP the files from lightning's /CERES/CERES_CM/Del-Packages directory to samantha. Files were owned by Subsystem POC.	Copied the files to my home directory, then FTP'd them from there.	FTP the files from lightning after the cron job finishes moving the files from the /CERES/CERES_CM/ cm_move directory and changing ownership and permissions.	15 minutes
9/22/99	GGEO	Output file names were wrong in test plan.	POC will submit updated test plan.	Verify the test plan is correct prior to delivery.	54 hours

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9/24/99	TISA Averaging	Output produced by running the test case differed from the expected output.	CERESlib was redelivered.	A correction had been made to a CERESlib module after the last CERESlib delivery. CERESlib should have been delivered and installed before TISA Averaging was tested.	3 days